

LISTING OF THE CLAIMS:

This listing of the claims replaces all prior versions:

1. (Currently Amended) A method for modulating flowering in a plant, comprising modifying in said plant the endogenous level of at least one compound selected from the group consisting of 12-hydroxyjasmonic acid, glucoside of 12-hydroxyjasmonic acid, sulfate ester of 12-hydroxyjasmonic acid, 12-hydroxymethyljasmonic acid, glucoside of 12-hydroxymethyljasmonic acid, sulfate ester of 12-hydroxymethyljasmonic acid, 11-hydroxyjasmonic acid, glucoside of 11-hydroxyjasmonic acid, sulfate ester of 11-hydroxyjasmonic acid, 11-hydroxymethyljasmonic acid, glucoside of 11-hydroxymethyljasmonic acid, sulfate ester of 11-hydroxymethyljasmonic acid, and mixtures thereof, wherein the endogenous level of at least one compound is modified by modulation the expression of a sulfotransferase encoded by a gene of SEQ ID NO:1.
2. (Currently Amended) The method of claim 1, wherein flowering of said plant is induced by increasing in said plant the endogenous level of at least one flowering inducing A method for inducing flowering in a plant, comprising increasing in said plant the endogenous level of at least one compound selected from the group consisting of 12-hydroxyjasmonic acid, glucoside of 12-hydroxyjasmonic acid, methyljasmonic acid, 12-hydroxymethyljasmonic acid, glucoside of 12-hydroxymethyljasmonic acid, 11-hydroxyjasmonic acid, glucoside of 11-hydroxyjasmonic acid, 11-hydroxymethyljasmonic acid, and glucoside of 11-hydroxymethyljasmonic acid, and mixtures thereof, wherein the endogenous level of at least one compound is increased by reducing the endogenous activity of a sulfotransferase encoded by a gene of SEQ ID NO:1 said flowering induction and said endogenous level increase being compared to a corresponding plant wherein the endogenous level of said at least one compound has not been modified.
3. - 5. (Cancelled)

6. (Currently amended) The method of claim 2 5, wherein ~~said genetic modification comprises the step of inhibiting the expression of at least one gene selected from the group consisting of AtST2a, AtST2b and functional homologues of AtST2a or of AtST2b.~~
7. (Currently amended) The method of claim 2 6, wherein ~~said gene expression is inhibited reducing the endogenous activity of a sulfotransferase encoded by a gene of SEQ ID NO:1~~ is by expressing into said plant an exogenous sequence coding for a nucleic acid sequence antisense to said gene.
8. (Original) The method of claim 7, wherein said exogenous sequence is expressed under the control of a constitutive or an inducible promoter.
9. (Currently amended) The method of claim 2 5, wherein said plant is transgenic.
10. – 42. (Cancelled)
43. (Currently amended) A method for producing a transgenic plant capable to flower early, said method comprising the steps of:
- introducing into a cell of a suitable plant an exogenous nucleic acid molecule comprising a sequence of nucleotides antisense to a nucleic acid sequence coding for an amino acid sequence having at least 70% similarity with SEQ ID NO:3 encoding a plant hydroxyjasmonic acid sulfotransferase;
 - regenerating a transgenic plant from the cell; and
 - growing said transgenic plant for a time and under conditions sufficient to inhibit expression of the hydroxyjasmonic acid sulfotransferase.
44. – 46. (Cancelled)
47. (Original) The method of claim 43, wherein the hydroxyjasmonic acid sulfotransferase is a 11- or a 12- hydroxyjasmonic acid sulfotransferase.

48. – 51. (Cancelled)

52. (New) The method of claim 43, further comprising the step of applying to a plant at least one flowering inducing compounds selected from the group consisting of 12-hydroxyjasmonic acid and 11-hydroxyjasmonic acid.

53. (New) The method of claim 43, further comprising the step of applying to said plant at least one inhibitor of a sulfotransferase having an amino acid sequence with at least 70% similarity with SEQ ID NO: 3.

54. (New) The method of claim 43, further comprising the step of increasing in said plant the endogenous level of an hydroxylase hydroxylating jasmonic acid and/or methyljasmonic acid.

55. (New) The method of claim 43, further comprising the step of lowering in said genetically modified plant the endogenous level of a sulfotransferase having an amino acid sequence with at least 70% similarity with SEQ ID NO: 3.

56. (New) The method of claim 43, further comprising the step of inhibiting in said plant the expression of at least one gene selected from the group consisting of *AtST2a* and its functional homologues.

57. (New) The plant genetically modified to flower early wherein the plant is obtained by the method of claim 43.

58. (New) A cut flower from the genetically modified plant of claim 57.